deposited thereon and on another set, a 10000 Å layer of USG material was deposited thereon, each thickness representing typical deposited thicknesses in commercial embodiments. Similar specimens were prepared with similar USG thicknesses deposited thereon with the SiC layer being treated for about 30 seconds instead of 20 seconds. Each set was examined for delamination under an optical microscope after about 1 hour, 2 hours, 3 hours, and 4 hours of annealing. Even with an annealing temperature of 450° C, the specimens showed no delamination.

IN THE CLAIMS:

Please cancel claims 27, 29, 39, and 41, without prejudice, and amend the following claims:

24. (Amended) A method of processing a semiconductor substrate, comprising:

depositing a first layer on the semiconductor substrate, the first layer comprising a material selected from the group consisting of organic polymeric materials, αC, αFC, SiCOH, and SiC;

exposing the first layer to a plasma consisting essentially of an inert gas; and

depositing a second layer over the first layer.

25. The method of claim 24, wherein the first layer comprises silicon carbide.

26. (Amended) The method of claim 24, wherein the inert gas is He.

27. (Cancelled) The method of claim 24, wherein exposing the first layer to the plasma comprises exposing the first layer in a substantial absence of oxygen, nitrogen, and hydrogen containing gases.

28. (Amended) The method of claim 25, wherein the inert gas is He.

29. (Cancelled) The method of claim 25, wherein exposing the first layer to the plasma comprises exposing the first layer in a substantial absence of oxygen, nitrogen, and hydrogen containing gases.

30. (Amended) The method of claim 24, wherein exposing the first layer to the plasma comprises generating the plasma by flowing the inert gas into a processing chamber at a rate of about 100 to about 4000 sccm, establishing a chamber pressure between about 1 to about 12 Torr, applying RF power to an electrode of the chamber to provide a power density of about 0.7 to about 11 W/in^2.

31. (Amended) The method of claim 24, wherein the exposing the first layer to the plasma and the depositing the first layer are performed in a single process chamber.

32. (Amended) The method of claim 25, wherein the exposing the first layer to the plasma and the depositing the first layer are performed in a single process chamber.

33. (Amended) The method of claim 24, wherein the exposing the first layer to the plasma does not substantially change composition of the first layer.

34. (Amended) A method of processing a semiconductor substrate, comprising:

step for depositing a first layer on a semiconductor substrate, the first layer comprising a material selected from the group consisting of organic polymeric materials, αC, αFC, SiCOH, and SiC;

treating the first layer with a plasma consisting essentially of an inert gas; and

depositing a second layer over the first layer.

35. (Amended) The method of claim 34, wherein the treating the first layer improves the oxidation resistance of the first layer.

36. (Amended) The method of claim 34, wherein the treating the first layer prevents delamination of the second layer from the first layer.

37. The method of claim 34, wherein the first layer comprises silicon carbide.

38. (Amended) The method of claim 34, wherein the inert gas is He.

39. (Cancelled) The method of claim 34, wherein the step for treating comprises exposing the first layer to the plasma in a substantial absence of oxygen, nitrogen, and hydrogen containing gases.

40. (Amended) The method of claim 37, wherein the inert gas is He.

41. (Cancelled) The method of claim 37, wherein the step for treating comprises exposing the first layer to the plasma in a substantial absence of oxygen, nitrogen, and hydrogen containing gases.

42. (Amended) The method of claim 34, wherein the treating the first layer comprises exposing the first layer to the plasma generated by flowing the inert gas into a processing chamber at a rate of about 100 to about 4000 sccm, establishing a chamber pressure between about 1 to about 12 Torr, applying RF power to an electrode of the chamber to provide a power density of about 0.7 to about 11 W/in^2.

43. (Amended) The method of claim 34, wherein the treating the first layer and the step for depositing the first layer are performed in a single process chamber.

44. (Amended) The method of claim 37, wherein the treating the first layer and the step for depositing the first layer are performed in a single process chamber.

45. (Amended) The method of claim 34, the treating step does not substantially change composition of the first layer.